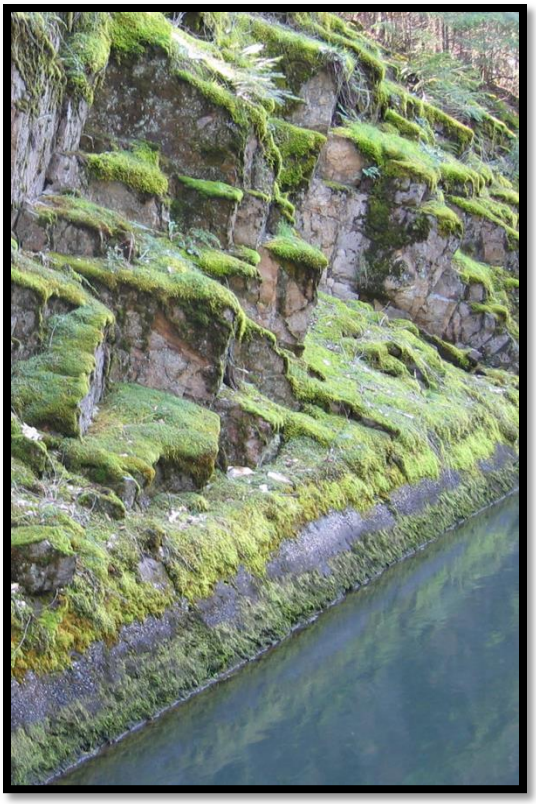
Chapter 14
Impacts and Benefits



Implementation of this Plan will potentially generate a range of benefits and impacts, at both the Plan and project-specific levels, and within and potentially outside the Cosumnes American Bear Yuba (CABY) region. The intent of this chapter is to describe, at a screening level, the impacts and benefits associated with implementation of this Plan and also whether those potential impacts or benefits might have an interregional effect. The effects of Plan implementation on disadvantaged communities (DACs) and Tribal communities are also discussed.

Prior to implementation of individual projects, a project-specific impact analysis will occur, associated with any applicable environmental compliance evaluations (e.g., California Environmental Quality Act [CEQA], National Environmental Policy Act [NEPA]). Please see Chapter 12, Project Review Process, for discussion of the timing and process for ensuring that adequate environmental analysis and impact and benefits assessments are conducted at a project level.

Table 14-1 describes and summarizes the potential CABY Integrated Regional Water Management Plan (IRWMP) implementation impacts and benefits both within the region and outside the region. These impacts and benefits are organized by programmatic area and are assessed based on performance measures as described in Chapter 13, Plan Performance and Monitoring.

14.1 Programmatic-level Impacts and Benefits

At a programmatic level, impacts from implementing this Plan are related to the increased responsibility for funding, implementing, and managing the IRWMP. The greatest area of impact will likely derive from costs and potential volunteer time associated with implementation of objectives and projects. Since the region has limited financial resources, the impact on volunteers and local agency staffs to oversee Plan implementation could be substantial, and/or slow or prevent some implementation measures.

Dedicated implementation will potentially entail: pursuit of grant and other funding sources; multiple forms of interpersonal contact involving stakeholder time commitment; project development, implementation, and monitoring; and plan performance monitoring and potential update. Side effects of this work may include ongoing refinement and identification of conflicts and purposeful pursuit of their resolution. For DAC and Tribal stakeholders, dedication of funding and staff time to this effort may prove particularly difficult.

The benefits of programmatic-level implementation are wide-ranging and generally qualitative. They include: a potential reduction of identified regional water-related issues by meeting objectives through

Plan implementation; increased understanding and information sharing between area stakeholders and interregional interests; opportunities for collaboration on project development; resolving regional and interregional conflicts and addressing emerging issues; potential identification of a more diverse set of funding sources to increase project-related investment in the region; opportunities for cost savings and creating an economy of scale, particularly from project integration; and as a venue to address policy and regulatory issues facing the region. Please see Table 14-1 for a comparison of impacts and benefits attributable to implementation of this Plan, by programmatic area.

The advantages of the regional approach also include increased opportunities to identify issues best addressed on a regional basis (e.g., climate change, legacy mine issues, and cross-watershed collaborations on fish passage), and ability to work on point and non-point source pollution strategies (as pollutants do not respect political boundaries).

The requirements of Plan preparation have mandated a level of increased regional understanding that did not exist prior to the formation of CABY. The ongoing dialogues, regular meetings, creation of work groups, and implementation of joint planning have resulted in the ability of organizations to realize an economy of scale, ability of agency and non-profit boards to engage in policy-level collaboration, the fostering of support and empowerment amongst small grassroots organizations, and the realization that implemented projects can and do provide benefits that extend beyond the needs of the region.

Importantly, the design of projects by diverse stakeholders will help to increase public acceptance of water management strategies as the public sees implementation and collaborative design of projects proposed by agencies and organizations that have not traditionally cooperated. This collaborative project design also fosters an increasing sense of Plan-level altruism – as consistent demonstration of CABY partners advocating to prioritize projects developed by other agencies above their own projects for implementation grants on multiple occasions. If benefits attributable to this Plan are to be broadly realized, it will be vital to include outreach to underrepresented groups (e.g., DACs and Tribal entities), as outlined in the Plan, so that benefits such as increased collaboration, development of joint projects, and cost savings manifest for those communities.

Additional benefits from Plan preparation have included the development and integration of over 170 projects from a diverse group of project sponsors, substantive collaboration on project integration, and maintenance of a website to communicate CABY water management issues and activities. The website provides an access point for data and information transfer to assist water and resource managers in their activities, as well as informing the general public. If maintained as planned, the website will continue to provide a primary data and information source for water/watershed planning and management for the region.

Finally, a number of CABY projects have the potential to serve as demonstration projects to illustrate the economic viability and technical merit of innovative approaches that can then be applied throughout the region and, potentially, the state.

14.1.1 Fostering Understanding and Information Sharing and Resolving Conflict

Perhaps one of the greatest and most positive impacts this Plan can offer is to improve understanding of the diverse points of view among stakeholders and interregional partners, and achieve balance where possible. If conflict resolution strategies offered in this Plan are pursued, greater collective efforts will help achieve the identified objectives. Planning within a regional (or sometimes interregional)

framework allows stakeholders to evaluate whether it is best to respond more broadly to an issue, to share knowledge and resources, and to minimize inter-entity conflict. By way of example, conflicts in the region over adaptation strategies to climate change (e.g., additional water storage versus enhancement of natural systems, such as mountain meadows) will likely intensify as the region warms and dries. Therefore, a collaborative venue for information sharing and conflict resolution may become all the more critical.

14.1.2 Opportunities to Collaborate on Project Development and Cost-saving

The Plan provides a vehicle for local entities to collaborate and develop joint projects of multiple benefits and also to identify and problem-solve on issues and topics/issues for which no projects are currently proposed.

Work Groups have proven to be a powerful venue for project development and integration and have enabled stakeholders to collaboratively review the outcomes of both individual projects and those projects' relationship to Plan implementation. This allows for a more comprehensive overview of and feedback on the methodologies used, and cumulative magnitude and benefit of projects that can be implemented or developed in the future. It can also provide for a greater cost-effective project design alongside potentially improved technical project design. Coordination also helps eliminate redundancy of project development and provides for integration of project suites that potentially allow for shared equipment, technical expertise, and personnel.

CABY and its sub-groups and member entities will seek project funding from a variety of sources, including Proposition 84, IRWM Implementation Grants. This grant application, in particular, will require substantive collaboration and capacity for a successful submittal; the CABY IRWM forum and guidance from the IRWMP provide information necessary to that and other applications. In the past, project sponsors have set aside their respective primary interests for the good of the region's water resources. Project sponsors continue to assist one another in developing project materials and funding applications, another positive outcome of this planning effort.

14.1.3 Identification of Diverse Funding Sources

As identified elsewhere in this Plan, the lack of funding sources relative to the water-management-related needs of the region is, in and of itself, a regional vulnerability. The CABY forum provides strength in numbers to take this issue to the interregional and State level where appropriate actions may help address this problem. A united front also bolsters the importance of funding not only for the CABY region, but for the benefits of CABY's resources to other California regions.

The Plan also increases the potential for investment in the region because funding entities often require a proposed project to be a component of a larger, deliberate process to achieve stated outcomes. They anticipate greater benefit from the cumulative project (watershed-wide) implementation than from standalone projects, and often require demonstrated collaboration, technical data sharing, and opportunities for cost savings among stakeholders. Once the Plan is adopted by a local entity, this also demonstrates local project endorsement. Collaboratively developed projects, included in a deliberate local process and adopted by local entities, improve chances for individual projects or project suites to be funded by a variety of sources.

14.1.4 Venue to Address Policy-related and Regulatory Processes

Some CABY stakeholders convey concerns that policies and regulations developed at the State level to address out-of-region water issues, such as Delta water supply and quality, may have a direct impact on the region that exceed any of the activities proposed in this Plan.

The CABY planning effort has and can continue to serve as a meaningful venue for discussion and problem-solving, as well as an organizing mechanism for a wide array of issues, including policy-related and regulatory compliance processes affecting the region.

14.2 Project-level Impacts and Benefits

Project-associated benefits to the region far outweigh impacts, particularly since each project will necessarily undergo environmental review to identify measures to minimize project-specific impacts. This project review process will include assessing viable project alternatives and developing mitigations to reduce negative impacts prior to project implementation.

Impacts from project implementation are primarily related to potential environmental or social disruption disturbance. An important aspect of project inclusion in the Plan is the requirement that disturbance to the landscape, or construction-related project activities, will undergo evaluation for mitigation and environmental compliance evaluation under CEQA or NEPA prior to implementation. In many cases, projects such as feasibility studies, public education and outreach, and/or best management practices implementation would not result in direct physical environmental impacts. Additionally, small habitat restoration projects (under five acres with some provisions) are exempt from CEQA review.

Most proposed projects would result in localized and temporary environmental impacts. These impacts could include, for example, disruption in traffic and noise from infrastructure improvements, temporary increases in sediment from stream restoration, and short-term deceases in air quality from prescribed burns. Social impacts could result from rate increases or changes in review policies. The likely types of projects that would occur by programmatic areas under Plan implementation are listed in Chapter 12, Table 12-2.

Benefits from project implementation include: invigoration of the local economy resulting from project-related employment, and long-term benefits from improvements to natural resources and habitat that support hunting, fishing, other recreational pursuits, and tourism. Energy conservation would result primarily from irrigation efficiency projects and improvements in municipal water delivery. Individual assessments of reductions in greenhouse gas emissions will be conducted as part of project evaluations with associated mitigations. Localized biomass and other alternative energy projects could conserve energy, employ construction workers, and potentially improve air quality. Adaptive strategies suggested to maintain the watershed's resilience under climate change would also reduce the region's vulnerability to drought, flooding, wildfire, and other climate-related phenomena.

4.2.1 Impacts from Failure to Implement the Plan

Over the course of this IRWMP Update, regional stakeholders have dedicated thousands of hours and, in most cases, considerable staff costs to planning effort. CABY's longevity and past successes, as well as previous watershed assessments and implemented projects display a deep commitment to watershed stewardship and cohesive regional water management. If the Plan were not implemented, it would be a

deep disservice to these involved and deeply committed stakeholders, as well as a lost opportunity to achieve watershed health and integrated water management.

The nature of some of the CABY region watershed's problems is critical: Some natural resource problems threaten human health and/or the survival of natural communities and species. In some cases, failure to implement may, at best, cause problems to deteriorate and, at worst, hasten irreparable damage.

Funding match has been obtained for many of the projects included in this Plan, and most of that match has associated time limitations. Failure to implement the Plan could result in loss of substantial match and thus investment in the region. In-kind contributions of volunteers and landowners would also be lost, cumulatively adding up to a substantial forfeiture of investment to the region.

14.2.2 Impacts and Benefits – Assessing Progress

Please see the Plan Performance and Monitoring section (Chapter 13) to understand how a semi-annual evaluation will aid the CABY organization in continuously assessing future impacts and benefits associated with Plan and project implementation.

An assessment of the identified impacts and benefits on a regional or interregional basis will be completed when performance measures are reviewed. This also will be part of the semi-annual reporting process as described in Chapter 4, Governance.

The process by which this evaluation will occur at the project level follows: Project sponsors, and potentially other relevant stakeholders, with projects going forward through the CABY IRWMP will be individually contacted regarding a report-out of the performance measures, applicable impacts and benefits, and regarding the quantitative as well as qualitative aspects of the impacts and benefits. Responses will be documented to inform evaluation of Plan implementation.

14.3 Impacts and Benefits to Disadvantaged Communities and Native American Tribes

As discussed in the Region Description (Chapter 5), the CABY region includes many communities identified as disadvantaged under the Department of Water Resources definition (80% or less of median household income). Additionally, recognizing the special status of Native American populations, CABY continues to work at developing productive and inclusive relationships with regional Tribal organizations.

Implementation of this IRWMP will have significant benefits to DACs and local Tribes. As discussed in the Stakeholder Involvement and Coordination chapters (Chapters 2 and 3), the CABY stakeholder outreach efforts and governance structure will allow representatives to actively participate in the development and implementation of the IRWMP. Through this open process, potential for grant funding, partnership, and matching funds will be available to communities previously overlooked by many regional planning efforts. This has, in fact, proven true during the 2012-2013 update with the submittal of a substantially increased number of DAC-related projects, and involvement of many more stakeholders in the IRWMP process.

Potential impacts of Plan implementation on DACs and Tribes could result from short-term physical changes during Plan construction such as increased sediment, increased traffic congestion, and disrupted recreational access. However, the measures to ameliorate both short- and long-term negative project-related impacts will be identified through the required CEQA and NEPA processes. When implemented, none of the projects proposed in the Plan will result in a long-term negative impact to disadvantaged, minority, Native American, or low-income communities.

If the Plan is *not* implemented, there is the potential for the deepening of conflicts with disadvantaged communities if water shortages remain unaddressed, public health hazards continue, and water and recreational standards decline within the region. CABY stakeholders seek to remedy these potential ills before they become acute, through the implementation of this IRWMP.

14.4 Interregional Benefits and Impacts

As part of its Plan preparation process, CABY has purposefully and systematically interacted with adjacent IRWMPs. It became obvious early in CABY's history that, while the CABY region supplies water to much of the state, its infrastructure for water delivery is primarily local, far-reaching, and rural in nature. Frequently, projects improving water conveyance, local habitat, and water quality result in increased benefits to downstream users outside of the CABY region. The benefits of alternative energy projects alone help the entire state to meet AB32 greenhouse gas emissions goals. The benefits of CABY project implementation extend far beyond Plan-specific boundaries and serve to enhance and emphasize CABY's status as a source water area.

Interregional benefits from this IRWMP will primarily derive from improvements to water quality that could affect interconnected but out-of-region water bodies, such as the Sacramento River, and from habitat improvements that affect migratory species and their well-being, such as waterfowl and recovery efforts for imperiled fish and wildlife. Benefits to other regions could also occur from clarification and amendment of State policy or regulations, such as Delta water policy that will affect source-water regions.

Fuel and fire management within the region could also have interregional impact: If regional management cannot reduce fuel loads, it is more likely that widespread, intense fires would spread elsewhere. Future projects associated with the Plan would be evaluated for off-site, including interregional, impact prior to implementation.

Table 14-1
Impacts and Benefits

CABY Programmatic Area	CABY Issue	Relevant Performance Measures	Potential Regional Impacts	Potential Regional Benefits	Potential Interregional Impacts	Potential Interregional Benefits
Water Supply	Conservation	• Acre feet per annum of water supply conserved or enhanced (SNC-PM) • Tons of carbon sequestered or emissions avoided (SNC-PM) • Number of communities implementing new (since 2012) urban water conservation plans and/or leak detection plans	→ Could be detrimental to water recycling efforts	→ Increased in-stream flow → Increased supply reliability → Improved in-stream water quality	None	→ Increased in-stream flow → Improved in-stream water quality
	Infrastructure	• Acre feet per annum of water supply conserved or enhanced (SNC-PM) • Miles of canal/ditch lined • Number of projects implemented to upgrade or improve aging infrastructure • Number of interties installed	→ Water quality degradation → Habitat/species removal → Construction-related impacts → Potential effects on DACs/EJ effects	→ Increased in-stream flow → Increased supply reliability → Improved in-stream water quality → Increased recreational opportunities → Increased system redundancy	→ Habitat/ species removal → Potential effects on DACs/EJ effects	→ Increased in-stream flow → Improved in-stream water quality → Increased recreational opportunities
	Water Storage	• Number of collaboratively developed plans and assessments (SNC- PM)	→ Reduced in-stream flow → Water quality degradation → Habitat/species removal → Construction-related impacts	→ Increased in-stream flow → Increased supply reliability → Improved in-stream water quality → Increased recreational opportunities → Decreased reliance on imported water → Better preparation for an altered hydrology	→ Reduced in-stream flow → Water quality degrada-tion → Habitat/ species removal	→ Increased in-stream flow → Increased supply reliability → Improved in-stream water quality → Increased recreational opportunities
	Water Management Operations	• Number of collaboratively developed plans and assessments (SNC-PM) • Number of water agencies collaborating in the development of an interregional drought response • Acre feet per annum of water supply conserved or enhanced (SNC-PM) • Site identified for recycled water infrastructure development/expansion	→ Reduced in-stream flow (if greater reliance on recycled water) → Water quality degradation → Habitat/species removal → Potential effects on DACs/EJ effects	→ Increased in-stream flow → Increased supply reliability → Improved in-stream water quality → Improved habitat/species conditions → Decreased operations costs → Saving construction of additional storage	None	→ Increased in-stream flow → Improved in-stream water quality → Improved habitat/ species conditions

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Impacts and Benefits

CABY Programmatic Area	CABY Issue	Relevant Performance Measures	Potential Regional Impacts	Potential Regional Benefits	Potential Interregional Impacts	Potential Interregional Benefits
Water Supply *(continued)*	Water Transfers	• Number of collaboratively developed plans and assessments (SNC-PM)	→ Reduced in-stream flow → Water quality degradation → Habitat/species removal → Potential effects on DACs/EJ effects	→ Increased in-stream flow → Increased supply reliability → Improved in-stream water quality → Improved habitat/species conditions → Increased recreational opportunities	None	→ Increased in-stream flow → More water available on a statewide level, adding flexibility to the system
	Groundwater	• Number of county-level approval processes for groundwater-dependent community plans assessed and summarized • Number of at-risk subdivisions identified and improved approval processes outlined	→ Potential effects on DACs/EJ effects	→ Potential effects on DACs/EJ effects → Reduced groundwater overdraft/overuse	None	None
Water Quality	Contamination	• Number of abandoned mine land sites improved or restored • Mass of pollutant reduced per year (SNC-PM) • Linear feet of stream bank protected or restored (SNC-PM) • Acres of riparian habitat and/or floodplain protected or restored • Measurable improvement in water quality	→ Temporary, site-specific construction impacts → Additional contamination sites discovered	→ Increased available water supply → Decreased treatment costs → Decreased number of health advisories → Decrease in bioaccumulation of heavy metals	None	→ Decrease in bioaccumulation of heavy metals → Better Delta water quality due to treatment at the source
	Sediment Management	• Acres of riparian habitat and/or floodplain protected or restored • Linear feet of stream bank protected or restored (SNC-PM) • Miles of stream where natural sediment transport regime is restored	→ Temporary, site-specific construction impacts → Negative feedback from recreation groups	→ Decreased treatment costs → Increase substrate available for species/ habitat use → Increased populations of threatened/endangered species	None	→ Increased populations of threatened/ endangered species
	Waste Water Management	• Number of collaboratively developed plans and assessments (SNC-PM) • White paper developed identifying major regional issues and strategies	None	→ Decreased spill violations	None	→ Increased downstream water quality
	Headwaters Protection	• Number of collaboratively developed plans and assessments (SNC-PM) • Number of critical surface drinking	→ Temporary, site-specific construction	→ Improved species habitat and populations → Increased water	None	→ Improved species habitat and populations

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CABY Programmatic Area	CABY Issue	Relevant Performance Measures	Potential Regional Impacts	Potential Regional Benefits	Potential Interregional Impacts	Potential Interregional Benefits
Water Quality (continued)		water watersheds identified and major threats described • Number of projects addressing threats to source water areas and increased resiliency of those watersheds • Water quality credit trading opportunities identified • Acres of land improved or restored (SNC-PM)	impacts → Competition between user groups and interests	retention in headwaters → Improved recreation opportunities → Decreased treatment costs → Increased watershed resiliency → Increased water supply → More stable temperature and base flow		→ Increased water retention in headwaters → Improved recreation opportunities → Increased watershed resiliency → Increased water supply → More stable temperature and base flow
	Temperature	• Linear feet of stream bank protected or restored (SNC-PM) • Acre feet per annum of streamflow improved (SNC-PM) • Acres of riparian habitat and/or floodplain protected or restored	→ Temporary, site-specific construction impacts	→ Improved species habitat and populations → Improved species makeup and diversity	None	→ Improved species habitat and populations → Improved species makeup and diversity
Environment and Habitat	Fisheries	• Acre feet per annum streamflow improved (SNC-PM) • Linear feet of stream bank protected or restored (SNC-PM) • Number of anadromous fish migration barriers removed • Miles of additional spawning habitat created	→ Temporary, site-specific construction impacts → Increased mandatory compliance measures to avoid species impacts	→ Increased coordination between water users and environmental groups → Improved species habitat and population → Return of previously extirpated species	None	→ Improved species habitat and population → Return of previously extirpated species – more robust statewide populations
	Aquatic Biota	• Linear feet of stream bank protected or restored (SNC-PM) • Acres of riparian habitat and/or floodplain protected or restored • Acre feet per annum of streamflow improved (SNC-PM)	→ Temporary, site-specific construction impacts	→ Increased species diversity and makeup → A more robust, healthier ecosystem	None	→ Increased species diversity and makeup → A more robust, healthier ecosystem
	Instream Flow	• Acre feet per annum streamflow improved (SNC-PM)	→ Water not otherwise available for M&I use	→ Increased species diversity and makeup → A more robust, healthier ecosystem	None	→ More water available for downstream users → Increased species

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CABY Programmatic Area	CABY Issue	Relevant Performance Measures	Potential Regional Impacts	Potential Regional Benefits	Potential Interregional Impacts	Potential Interregional Benefits
Environment and Habitat *(continued)*				→ A more natural flow regime and temperature		diversity and makeup → A more robust, healthier ecosystem
	Meadows	• Number of meadow restoration or enhancement projects developed, funded, and/or implemented • Acres of land improved or restored (SNC-PM)	→ Temporary, site-specific construction impacts	→ Reduced surface water contamination → Greater landscape water holding capacity → Increased summer base flow → Decreased temperatures → Improved habitat	None	→ Greater landscape water holding capacity → Improved habitat conditions
	Fire and Fuels	• Acres of land improved or restored (SNC-PM) • Tons of carbon sequestered or emissions avoided (SNC-PM)	→ Temporary, site-specific construction impacts → Increased emissions from fuels management activities	→ Decreased emissions from catastrophic fire → Improved habitat conditions → Greater landscape water holding capacity → Improvement in landscape-level response to climate change	→ Increased emissions from fuels manage-ment activities	→ Decreased emissions from catastrophic fire → Improved habitat conditions → Greater landscape water holding capacity → Improvement in landscape-level response to climate change
	Invasive Species	• Number of collaboratively developed plans and assessments (SNC-PM) • Number of launch sites where AIS information was distributed (annually) • Number of sites surveyed for AIS (annually) • Number of AIS-infested water bodies identified (annually) • Number of AIS-infested water bodies closed (annually) • Acres of land improved or restored (SNC-PM) • Number of trainings conducted per year • Number of acres surveyed for	→ Temporary site disturbance	→ Improved habitat for native plants and animals → Improved public education → Decreased chance of AIS transmittance between water bodies → Cost savings due to avoided contamination problems	None	→ Greater control over invasive species spread → Interregional coordination on education/ outreach efforts

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CABY Programmatic Area	CABY Issue	Relevant Performance Measures	Potential Regional Impacts	Potential Regional Benefits	Potential Interregional Impacts	Potential Interregional Benefits
		terrestrial invasive species • Number of acres treated for terrestrial invasive species				
Climate Change	*None*	• Number of adaptive strategies implemented in the CABY region • Kilowatts of renewable energy production capacity created (SNC-PM) • Tons of carbon sequestered or emissions avoided (SNC-PM) • Number of collaboratively developed plans and assessments (SNC-PM)	→ Temporary site disturbance → Habitat loss due to infrastructure placement → Harm to bird species by wind power infrastructure	→ Increased regional adaptation and mitigation to projected climate effects → Increased production of "clean" power → Increased number of green jobs in region	→ Habitat loss due to infra-structure placement → Harm to bird species by wind power infra-structure	→ Greater contributions to the State's AB32 compliance for "clean" energy
Human-Landscape Interaction	Habitat Alteration	• Number of locations identified as integral to maintaining habitat connectivity throughout the CABY region • Acres of land conserved (SNC-PM) • Acres of land improved or restored (SNC-PM)	→ Short-term site disturbance due to construction → Reduced acres available for economic use (agriculture or silviculture)	→ Enhanced species habitat and populations → Increased ability of species to migrate cross-region for annual or climactic reasons	None	→ Maintains species diversity on a State level
	Native American Uses	• Number and diversity of people reached (SNC- PM)	None	→ Increase in Native American representation in water management discussions → Increased regional awareness of Tribal presence and history → Increased protection of resources important to the Native American way of life	None	→ Increased interest in CABY region Tribes and collaboration efforts
	Flooding	• Linear feet of stream bank protected or restored (SNC-PM) • Number of significant sites protected (SNC-PM) • Decrease in the number of acres covered by the FEMA inundation zone	→ Short-term, site-specific impacts due to construction → Land use restrictions → Economic effects	→ Increase in riparian habitat (with green infrastructure) → Low-maintenance flood infrastructure → Reduced risk to life and property	None	→ Decrease in flood impacts

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CABY Programmatic Area	CABY Issue	Relevant Performance Measures	Potential Regional Impacts	Potential Regional Benefits	Potential Interregional Impacts	Potential Interregional Benefits
Human-Landscape Interaction *(continued)*			(insurance requirements for homeowners)	→ Avoided loss costs → Decreased insurance costs → Increased groundwater recharge		
	Open Space	• Acres of land conserved (SNC- PM)	→ Short-term site disturbance due to construction → Reduced acres available for economic use (agriculture or silviculture)	→ Enhanced species habitat and populations → Increased recreation opportunities → Increased/ preserved regional aesthetics	None	→ Maintains species diversity on a State level → Increased recreation opportunities and regional aesthetics
	Disadvantaged Communities	• DAC projects make up at least 30% of the total infrastructure funding request of the CABY IRWMP on an annual basis, including all grant and loan requests to all potential funders	→ Funds do not go to other agencies/ organizations	→ DACs get needed funding for important projects → DACs remain a viable part of CABY and active in the process → Cultural diversity is preserved in the preservation of small, remote communities	None	None
	Recreation	• Number of new recreation access points (SNC-PM) • Feet of trail/path constructed or improved (SNC-PM) • Acres of land improved or restored (SNC-PM)	→ Increased impacts to water quality and surrounding habitat and species	→ Increased social consciousness regarding the environment → Increased health of people using the recreation options → Opportunities for environmental education	→ Species and habitat influences can be felt down-stream	→ Recreation opportunities can be used by all
	Hydropower	• Kilowatts of renewable energy production capacity maintained or created (SNC-PM) • Tons of carbon sequestered or emissions avoided (SNC-PM)	→ Negative effects on species and habitats (if traditional, in-stream projects)	→ No effects on species and habitats (micro- and small-hydro in conveyance lines) → Increased regional adaptation and mitigation to projected climate effects → Increased production of "clean" power	→ Species and habitat influences can be felt down-stream	→ Increased availability of "clean" power to the State and the grid

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CABY Programmatic Area	CABY Issue	Relevant Performance Measures	Potential Regional Impacts	Potential Regional Benefits	Potential Interregional Impacts	Potential Interregional Benefits
Human-Landscape Interaction *(continued)*				→ Increased number of green jobs in region		
	Agriculture	• Number and diversity of CABY region agricultural stakeholders active in the development of and lobbying for revised ILRP regulations for the Sierra • Acres of land conserved (SNC-PM) • Number and value of new, improved, or preserved economic activities (SNC-PM) • Number of collaboratively developed plans and assessments (SNC-PM)	None	→ Increased value of agricultural activities in the CABY region → Inclusion of agricultural interests in the CABY process → Preserved economic options for regional residents → Increased availability of agro-tourism options	None	None
	Sustainable Economy/Self Sufficient Communities	• Number and types of jobs created (SNC-PM) • Number and value of new, improved, or preserved economic activities (SNC-PM) • Sustainability Revolving Fund developed	→ Political decisions regarding funding choices → Requires a formal, long-term structure for funding and follow-up (staff and funding requirements)	→ Increase in the number of small natural-resource-dependent businesses → Increased viability of small natural-resource-dependent businesses → Increased investment in CABY region stakeholders	None	None
	Governance	• Increase in CABY membership/CABY IRWM Plan adoptees • Number of presentations to CABY member organizations per annum • Number and diversity of people reached (SNC-PM) • Number of stakeholders participating in Sierra Lobby Day • Number of outreach opportunities taken with State government officials to advocate for source water IRWM regions • Regulatory/Legislative Issues Committee developed by 2014 to identify potential actions	→ Political discussions/ decisions regarding CABY positions → Requirement for additional stakeholder time and resources	→ Political discussions/ decisions regarding CABY positions → Increased regional cohesiveness → Increased awareness on a State level of the Sierra and the resources it provides → Increased investment in CABY and the Sierra	None	→ Helps with Sierra Water Work Group and Mountain Counties goals

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CABY Programmatic Area	CABY Issue	Relevant Performance Measures	Potential Regional Impacts	Potential Regional Benefits	Potential Interregional Impacts	Potential Interregional Benefits
Overarching Objectives	Education and Outreach	• Measurable changes in knowledge or behavior (SNC-PM) • Number and diversity of people reached (SNC-PM) • Number and types of jobs created (SNC-PM)	None	→ Synergies with K-12 curriculum → Increased level of investment of regional residents in CABY watersheds → Increased number of people reached in non-traditional cultural groups	None	→ Sharing regional curriculum saves money → Education of recreational visitors can help improve stewardship in other regions
	Financial Feasibility and Sustainability	*None identified*	→ Resources don't go toward other programs and projects	→ Increased regional collaboration and cooperation → Reliability on CABY as an organization → Preserves regional self-determination and responsibility	None	→ Preserves regional self-determination and responsibility
	Data Analysis and Monitoring	• CABY documents are annually updated in the SWIM data management system	→ Inadvertently sharing sensitive data	→ Increased regional awareness of project implementation and data availability → Regional synergies from the awareness of potential project partners	None	Similar to regional benefits
	Regional Planning and Land Use	• Land use planners are active in the CABY RWMG • Number of collaboratively developed plans and assessments (SNC-PM) • Percent of pre-project and planning efforts resulting in project implementation (SNC-PM)	→ Political sensitivity to the issue → Staff time	→ Efficient use of time and resources for planning → Cost effective infrastructure planning and development → Collaborative mandate compliance	None	→ Can create a more comprehensive regional approach and ethic with regard to resource and development planning